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Essential oil of cypress (*Cupressus sempervirens* L.)

*Huile essentielle de cyprès (*Cupressus sempervirens *L.)*

Reference number
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Foreword

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 54, *Essential oils.*

Essential oil of cypress (*Cupressus sempervirens* L.)

1 Scope

This document specifies certain characteristics of the essential oil of cypress (*Cupressus sempervirens* L.) in order to facilitate assessment of its quality.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/TS 210, *Essential oils — General rules for packaging, conditioning and storage*

ISO/TS 211, *Essential oils — General rules for labelling and marking of containers*

ISO 212, *Essential oils — Sampling*

ISO 279, *Essential oils — Determination of relative density at 20 °C — Reference method*

ISO 280, *Essential oils — Determination of refractive index*

ISO 592, *Essential oils — Determination of optical rotation*

ISO 875, *Essential oils — Evaluation of miscibility in ethanol*

ISO 11024 (all parts), *Essential oils — General guidance on chromatographic profiles*

ISO 18321, *Essential oils — Determination of peroxide value*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
essential oil of cypress
essential oil obtained by steam distillation of branches and leaves of *Cupressus sempervirens* L.

Note 1 to entry: For information on CAS number, see ISO/TR 21092.

4 Requirements

4.1 Essential oil of cypress (*Cupressus sempervirens* L.) shall meet the requirements as given in Table 1.

Table 1 — Requirements for the essential oil of cypress (*Cupressus sempervirens* L.)

Characteristics	Requirements	ISO test method
Appearance	Clear mobile liquid	—
Colour	Pale yellow to yellow	—
Odour	Characteristic, terpenic, fresh, sweet	—
Relative density at 20 °C, d_{20}^{20}	0,863 to 0,885	ISO 279
Refractive index at 20 °C	1,468 to 1,478	ISO 280
Optical rotation	Between +15° and +30°	ISO 592
Peroxide value	0 mmol/l to 20 mmol/l	ISO 18321
Miscibility in ethanol 90 % (volume fraction), at 20 °C	It shall not be necessary to use more than eight volumes of ethanol 90% (volume fraction) to obtain a limpid solution with one volume of essential oil. A slight opalescence is sometimes observed.	ISO 875
Miscibility in ethanol 95 % (volume fraction), at 20 °C	It should not be necessary to use more than two volumes of ethanol 95% (volume fraction) to obtain a limpid solution with one volume of essential oil. A slight opalescence is sometimes observed.	ISO 875

4.2 Chromatographic profile

Carry out the analysis of the essential oil by gas chromatography. Determine the chromatographic profile in accordance with ISO 11024 (all parts). In the chromatogram obtained, identify the representative and characteristic components shown in Table 2. The proportions of these components, indicated by the integrator, shall be as shown in Table 2. This constitutes the chromatographic profile of the essential oil.

Table 2 — Chromatographic profile

Components	Spanish type		French type	
	Min. %	Max. %	Min. %	Max. %
α-Pinene	40,0	60,0	40,0	65,0
α-Thujene	0,5	2,0	0,2	1,2
α-Fenchene	0,5	2,0	0,3	1,2
β-Pinene	0,5	3,0	0,5	3,0
Sabinene	0,5	2,0	0,4	2,6
δ-3-Carene	16,0	27,0	12,0	25,0
Myrcene	1,0	3,5	1,0	3,5
Limonene	2,0	5,0	1,8	5,0
Terpinen-4-ol	0,5	2,0	0,2	2,0
NOTE The chromatographic profile is normative, contrary to typical chromatograms given for information in Annex A.				